

Claims

Sub 1/

1. An earthquake resistant structure comprising:

a construction block having an upper surface and a lower surface and sides surfaces;  
aggregate pieces within said block adjacent to said lower surface;  
said aggregate pieces being in direct contact with one another;  
said aggregate pieces extending from and between said construction block sides;  
said aggregate pieces held in contact with each other by mortar so that impact and stress forces applied to said construction block are transferred directly from one aggregate piece to another throughout said construction block.

2. An earthquake resistant structure as in claim 1 wherein:

a plurality of said construction blocks is placed adjacent to one another such that said aggregate pieces at one surface of one said block are in direct contact with said aggregate pieces of another adjacent said block such that forces on one block are transferred through said aggregate materials from one said block to another adjacent said block.

Sub 2/

3. An earthquake resistant structure as in claim 1 wherein:

said construction block is formed in the shape of a parallelepiped;  
a plurality of said blocks is placed side by side adjacent onto one another in the shape of an arch with said aggregate pieces of one said construction block contacting aggregate pieces in an adjacent said construction block.

Sub 1  
4. An earthquake resistant structure as in claim 3 wherein:

said parallelepiped blocks placed in the form of an arch have their intrados ends abutting each other and their extrados ends spaced from each other; concrete is within said space between said blocks extrados ends.

Sub 2  
5. An earthquake resistant structure as in claim 1 wherein:

said construction block is formed in the shape of a tetrahedron with two triangular sides and two parallel sides;

a plurality of said construction blocks is placed adjacent to one another such that said aggregate pieces on adjacent surfaces of one block are in direct contact with aggregate pieces of said adjacent block such that forces on one block are transferred through said aggregate material from one said block to another said block along their entire contacting surface.

6. An earthquake resistant structure as in claim 1 wherein:

said aggregate material consists of a coarse aggregate material and a fine aggregate material in intimate contact with each other throughout said block.

7. An earthquake resistant structure as in claim 1 wherein:

said block has a tube therein extending from one said side to another said side for accommodating a prestress means.

8. An earthquake resistant structure as in claim 1 wherein:

said aggregate pieces are of a low quality material.

9. An earthquake resistant structure as in claim 8 wherein:

said aggregate pieces are slag.

10. An earthquake resistant structure as in claim 8 wherein:

said aggregate pieces are crushed stone.

11. An earthquake resistant structure as in claim 8 wherein:

said aggregate pieces are concrete chips.

12. An earthquake resistant structure as in claim 8 wherein:

said aggregate pieces are Sirasu.

5605/ 13. A process for forming construction blocks comprising:

providing a mold in the desired shape of a construction block;

placing aggregate pieces within said mold;

positioning said aggregate pieces within said mold so that said aggregate pieces are in firm contact with said mold sides and in firm contact with each other throughout said mold;

pouring mortar over said positioned aggregate pieces so as to maintain their position;

removing said block from said mold.

14. A process for forming construction blocks as in claim 13 including:

forming said block in the shape of a parallelepiped;

placing a plurality of said block in side by side contacting relationship such that said aggregate in one block contacts said aggregate in an adjacent block so that force applied to one said block is transferred directly from said aggregate in said one block to said aggregate in said adjacent block.

15. A process for forming construction blocks as in claim 14 including:

forming said blocks into the shape of an arch such that said blocks abut each at their intrados ends and are spaced from each other at their extrados ends;

filling said space at said extrados ends with concrete to hold said blocks in place.

16. A process for forming construction blocks as in claim 13 including:

forming a support structure in the shape of an arch;

placing said mold on one end of said support structure;

forming said block in place on said support structure;

curing said mortar on said supporting structure;

removing said mold and using it to form another said block adjacent to said previously formed block to manufacture said blocks adjacent to one another with said aggregate of one said block in contact with said aggregate of an adjacent said block.

17. A process for forming construction blocks as in claim 13 including:

placing a tube within said mold with said aggregate pieces to provide a conduit for a prestress means within said block.

sb 08/ 18. A process for forming construction blocks as in claim 13 including:

said aggregate pieces including both coarse aggregate and fine aggregate;

placing both said coarse aggregate pieces and said fine aggregate pieces within said mold such that said fine aggregate fits between spaces between said coarse aggregate and such that said fine aggregate and said coarse aggregate are in intimate contact with each other.

19. A process for forming construction blocks as in claim 13 including:

selecting said aggregate pieces from a low quality material.